LABORATORY SERIES

EDITOR'S NOTE: The Laboratory Series, initiated in early 1979, continues with this issue's feature, the Beaufort Laboratory. The series is coordinated by Dr. C. Dale Becker of Battelle Pacific Northwest Laboratories, Richland, Washington.

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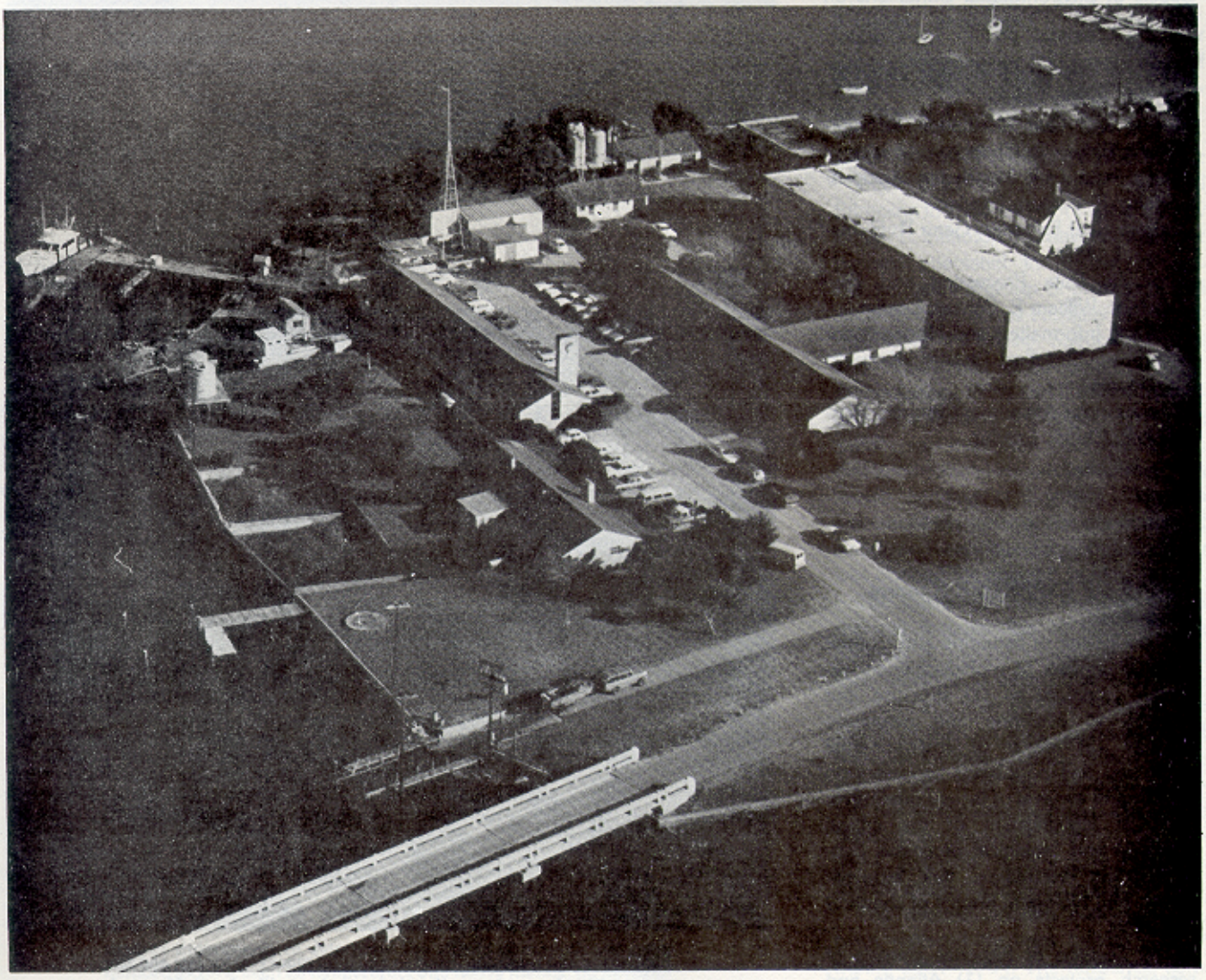
BEAUFORT LABORATORY

ADDRESS: Beaufort Laboratory,
Southeast Fisheries Center
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
P.O. Box 570
Beaufort, North Carolina 28516



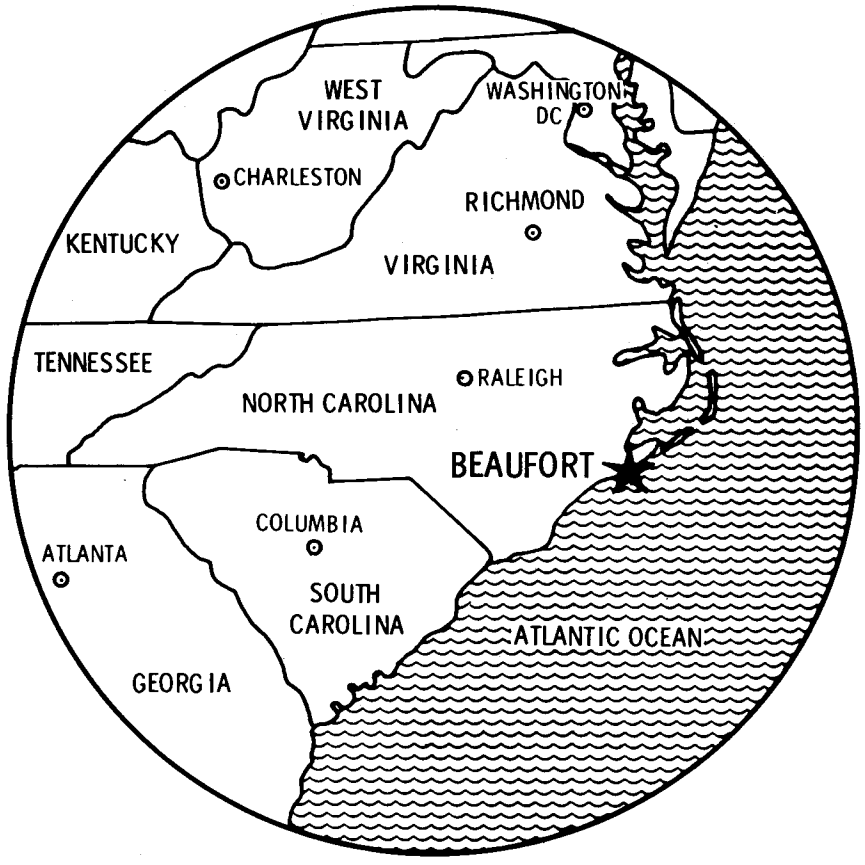
Aerial view of the Beaufort Laboratory on the northern half of Pivers Island, near Beaufort, North Carolina.

LABORATORY FUNCTIONS (Objectives):

The Beaufort Laboratory emphasizes field and laboratory studies on ecological processes and marine fisheries and applies knowledge from these studies to assess the impact of man's activities on fishery productivity. The Laboratory, part of the Southeast Fisheries Center, has two Divisions, Estuarine and Coastal Ecology, and Fisheries.

KEY PERSONNEL:

Director: Theodore R. Rice
Division of Estuarine and Coastal Ecology: Ford A. Cross, Chief
Division of Fisheries: James E. Sykes, Chief
Administrative Officer: Bernard G. Allred
Editor and Scientific Services: John W. Reintjes
Ecosystem Structure and Function: Gordon W. Thayer, Leader
Effects of Environmental Conditions on Production of Organisms: Donald E. Hoss
Cycling of Chemical Pollutants: David W. Engel, Acting Leader
Atlantic and Gulf Menhaden Management: Robert B. Chapoton, Leader
Atlantic and Gulf Menhaden Analysis: Walter R. Nelson, Leader
Offshore Reef Fisheries: Gene R. Huntsman, Leader
Automatic Data Processing and Biometrics: William E. Schaaf, Leader
Technical Information and Management Services, Statistical Division: Kenneth C. Harris
Environmental Assessment Branch: Randall P. Cheek, Leader



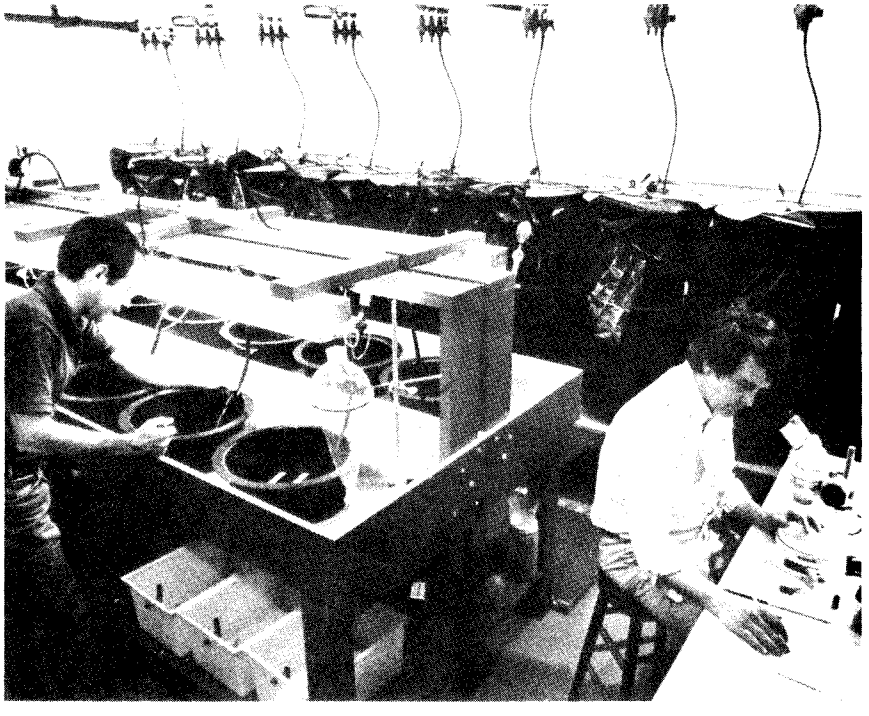
AREAS OF EXPERTISE (Current Programs):

The Division of Estuarine and Coastal Ecology consists of multidisciplinary research organized as (1) structure and function of estuarine and nearshore habitats; (2) effects of environmental conditions and population processes on growth and survival of fishery organisms; and (3) identification of the critical chemical and biological processes controlling the distribution, flux, bioavailability, and biological impact of chemical pollutants.

The Division of Fisheries consists of research projects on (1) Atlantic and Gulf menhadens; (2) coastal herrings; (3)

Measuring and weighing Spanish and king mackerel for age and size composition from a recreational charter boat: Charles S. Manooch and Joey Johnson.

A staff biologist on a natural reef, off the North Carolina coast, approaches a gag during a survey.



Larval fish spawned and reared in the laboratory at Beaufort and used in experiments to determine the effects of natural and man-induced factors, such as temperature and heavy metals, on development, growth, and survival. The biologists are William F. Hettler and Allyn B. Powell.

offshore reef fishes, mainly snappers and groupers; and (4) coastal pelagics, including Spanish and king mackerels and bluefish.

UNIQUE LABORATORY FEATURES:

The Beaufort Laboratory consists of a complex of buildings containing offices; laboratories; conference, storage, and work rooms; maintenance shops; and library. Significant features include (1) continuously flowing seawater rearing system and 50 fiberglass tanks of various capacities; (2) equipment for handling, using, and storing radioactive isotopes with research instruments and counters; (3) analytical instruments such as amino acid analyzer, respirometers, carbon/hydrogen/nitrogen analyzer, and an atomic absorption spectrophotometer; (4) spawning and rearing rooms for marine organisms; (5) clean room for low level analysis of trace metals; and (6) computer facility consisting of a remote job entry terminal connected to the U.S. Department of the Interior Computer Center, Washington, D.C., and Office of Personnel Management Computer Center, Macon, Georgia.

LABORATORY HISTORY (Summary):

After visits by zoologists Gill and Stimpson in 1860 and Coues and Yarrow in 1871, Beaufort became a resort for persons interested in marine biology. For ten years a group of professors and students from Johns Hopkins University maintained the facility. Spencer F. Baird and others connected with the U.S. Commission of Fish and Fisheries investigated the fishes of the region during the 1880's, but it was not until 1899 that a biological laboratory was established in a rented building at Beaufort. Congress authorized the construction of a biological station on Pivers Island and the laboratory was opened for research in May 1902.

The Laboratory was founded with a regional responsibility to learn the life histories of marine animals and plants, their relations to each other and to the environment, their resource potential, the effects of man on their abundance, and methods for their scientific culture. Now, eighty years later, the Beaufort Laboratory has similar aims expressed as ecology, population dynamics, fishery management, resource development, environmental quality, and aquaculture.

The original wooden buildings have been replaced by brick buildings, built during 1954–1964. The residence, constructed in 1928 is the only frame building remaining. A concrete bridge, pro-

Senior Staff Members of the Beaufort Laboratory: *Front row*: Bernard G. Allred, John W. Reintjes, Walter R. Nelson, Donald E. Hoss, David W. Engel, Kenneth C. Harris. *Back row*: T. R. Rice, Robert B. Chapoton, William E. Schaaf, Randall P. Cheek, Gene R. Huntsman, Ford A. Cross, Gordon W. Thayer.

viding direct access to the Laboratory, was completed to Pivers Island in 1968.

COOPERATING AGENCIES:

Mutually funded cooperative research programs with the Department of Energy and its predecessor, the Atomic Energy Commission, has been conducted since 1949. Other mutually funded research is with the National Institute of Environmental Health Sciences and with other agencies within NOAA.

Eight staff are adjunct professors, Department of Zoology, North Carolina State University, and master's and doctoral candidates have been in residence at Beaufort every year since 1964.

Staff members serve on graduate committees for the University of North Carolina, both at Chapel Hill and at Greensboro, Virginia Institute of Marine Science, University of Virginia, University of South Carolina, University of Delaware, Duke University, and Old Dominion University.

Duke University Marine Laboratory, University of North Carolina Institute of Marine Science, North Carolina State University Seafood Laboratory, and North Carolina Division of Marine Fisheries are located in the vicinity. An exchange of equipment, library holdings, and talent is active among the institutions.